



U.S. Environmental Protection Agency Great Lakes National Program Office Significant Activities Report

On the Web at:
www.epa.gov/glnpo

July 2002

IN THIS ISSUE:

- Lake Erie Checkup Continues
- Detroit River PCB Contamination Subject of Workshop
- 2001 Sediment Remediation Statistics
- Mudpuppy Probes Sediments
- Plant Invader Controls Tested
- Invasive Species Issue Gets High-Level Attention
- St. Joseph Watershed Conference
- GLNPO Tests Remote Meetings Technology

Lake Erie Checkup Continues

The U.S. and Canadian special study of Lake Erie, the "Lake Erie Supplemental Study of Trophic Status" continued with a five-day scientific cruise of the lake. The 180-foot USEPA research ship, the *R/V Lake Guardian* departed Cleveland, Ohio on July 17th with a full complement of scientists aboard. In addition to scientists from



EPA Scientist Prepares Rosette Water Sampler for Deployment from *R/V Lake Guardian*

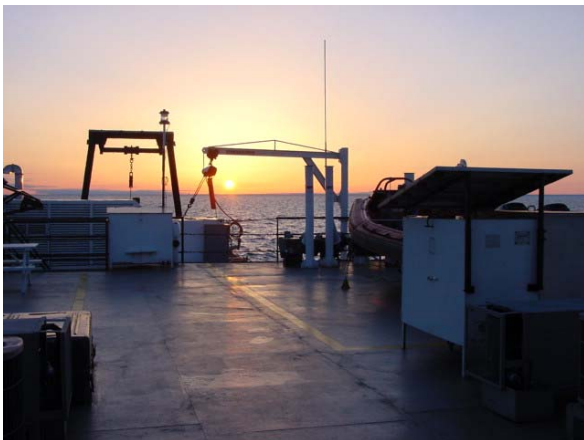
the USEPA's Great Lakes National Program Office, teams of scientists from Case Western Reserve University, Michigan State University, Ohio State University, Penn State University, University of Waterloo, and the U.S. Geological Survey also participated. They measured biological and chemical processes which will begin to give us an understanding of the changes happening in Lake Erie, particularly its central basin. USEPA scientists also measured dissolved oxygen concentrations in the lake, and observed what they believe is the beginning of loss of oxygen from portions of the central basin. The cruise ended in Cleveland on July 21st.

Some of the experiments that were conducted during the cruise included:

- Measuring phytoplankton production and respiration in the epilimnion (upper layer of warmer, less dense water), hypolimnion (lower layer of colder, more dense water) and thermocline (the boundary between the epilimnion and hypolimnion) using incubation chambers suspended in the water.
- Measuring production in incubators aboard ship.

Two fairly unique instruments were used during the cruise:

- The Self-Contained Autonomous Micro-Profiler or SCAMP, which looks at micro temperature and dissolved oxygen profiles to determine mixing of hypolimnion and thermocline water, and
- A multiple sensor in situ fluorometer to look at the composition of the phytoplankton based on their pigments (colors).



The sun sets on another long day of sampling aboard the *R/V Lake Guardian*

Samples were also taken to be used in measuring sediment oxygen demand back in the U.S. Geological Survey laboratory in Ann Arbor.

Two more scientific cruises will take place aboard the *Lake Guardian* this year. The next cruise is scheduled for mid-August. (Contact: Glenn Warren, 312-886-2405, warren.glenn@epa.gov)

For more information about the Great Lakes National Program Office's monitoring program, visit: <http://www.epa.gov/glnpo/monitor.html>.

For more information about the *R/V Lake Guardian*, visit: <http://www.epa.gov/glnpo/guard/ship.html>.

Detroit River PCB Contamination Subject of Workshop

On June 18th and 19th in Windsor, a workshop was convened entitled "Evaluating Ecosystem Results of PCB Control Measures Within the Detroit River-Western Lake Erie Basin." The goal of the workshop was to assess recent trends in PCB loads and associated ecosystem changes within the Detroit River system, and to develop recom-

mendations for future monitoring, research, modeling and management. On June 18th, a series of presentations were made on the various research, monitoring and remedial activities that have taken place in the system over the past few years. On June 19th, three breakout sessions were convened focusing on: research and modeling; sediment management; and monitoring. One of the more interesting observations noted is that PCB concentrations in biota while declining through the mid 1990's seem to have leveled off since then. It also appears that the Trenton Channel area is still the most contaminated zone in the Detroit River system. Additionally, more work needs to be done looking at disposal options for contaminated sediments. Proceedings and recommendations from the workshop should be available in a report by later this fall. This workshop was convened by Wayne State University through a grant awarded by GLNPO in 2001. EPA personnel who participated included: Laura Lodisio; Rose Ellison; Demaree Collier and Marc Tuchman. (Contact: Marc Tuchman, 312-353-1369, tuchman.marc@epa.gov)

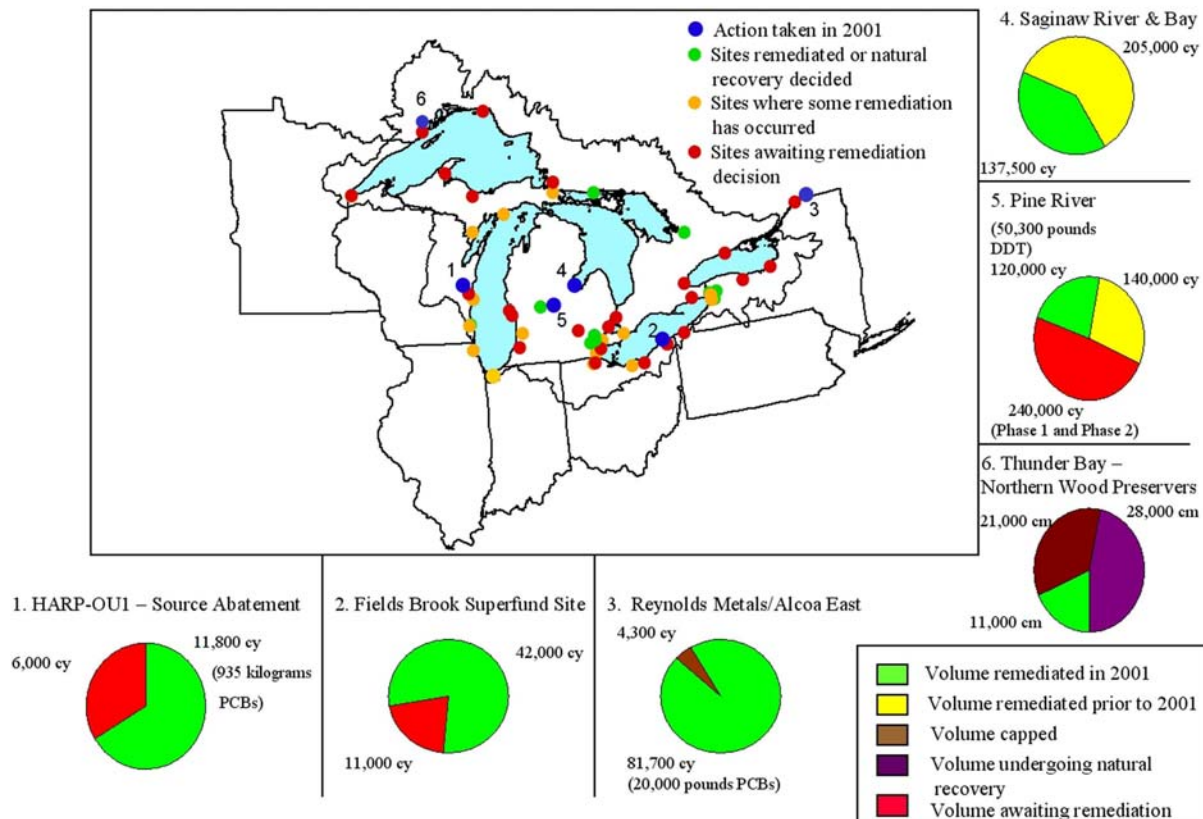


Detroit River Looking Upstream
(Grosse Ile is the island in the middle of the river.
The Trenton Channel is on the left side of the island.)

2001 Sediment Remediation Statistics

Over 400,000 cubic yards of contaminated sediments were remediated in the Great Lakes during 2001. Of this, 393,000 cubic yards were remediated at five U.S. sites, and 14,400 cubic yards at a site in Canada.

Great Lakes Sediment Remediations in 2001



Full details about sediment remediation projects carried out in 2001, as well as in other years can be found at: <http://www.epa.gov/glnpo/glindicators/sediments/remediateb.html> (Contact: Demaree Collier, 312-886-0214, collier.demaree@epa.gov)

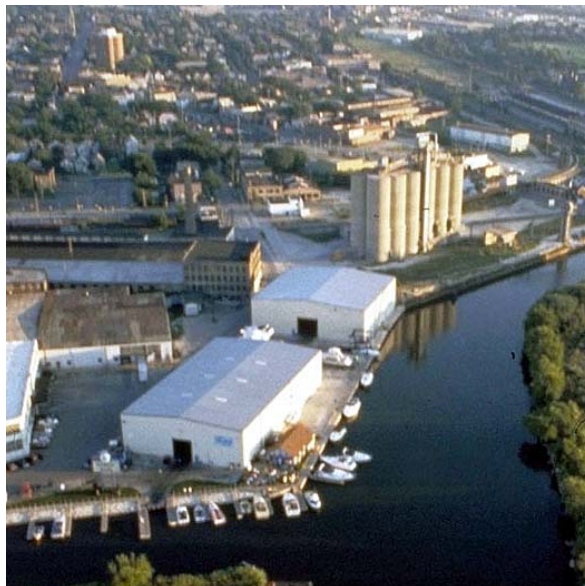
Mudpuppy Probes Sediments

The USEPA Great Lakes National Program Office's specially-outfitted sediment sampling boat, the *R/V Mudpuppy* was once again busy sampling sediments around the Great Lakes.

From June 2nd to 6th the *R/V Mudpuppy* was in Duluth, Minnesota helping the U.S. Army Corps of Engineers in collect sediment core samples in Duluth/Superior Har-

bor, Minnesota/Wisconsin. The Corps was collecting sediment data to determine the quality of the sediments they plan to dredge to support navigation in the harbors. A total of 28 stations were sampled during the four-day effort. Of the stations sampled, sediment cores (vertical sections of mud) were collected at 19 locations and surface samples of sediment were collected at nine locations using a Ponar grab sampler.

Later in the month, the *Mudpuppy* traveled to Milwaukee to help the Corps sample the navigation channel in the Milwaukee River and Harbor. From June 24th to 26th, the Mudpuppy sampled a total of 20 stations. Sediment core samples were collected at 14 locations, while surface samples of the sediments were collected at the remaining six stations. The sampling was part of the Corps' routine sampling to support its navigational dredging responsibilities. The Corps usually samples the Milwaukee River and Harbor about every five years.



Milwaukee River and Harbor

The analyses of the core and surface sediment samples from both Duluth/Superior Harbor and Milwaukee River and Harbor will be shared with GLNPO to increase our understanding of sediment contamination in these Areas of Concern. (Contact: Scott Cieniawski, 312-353-9184, cieniawski.scott@epa.gov).

Plant Invader Controls Tested

On June 14th, GLNPO's Mike Makdisi, Mike Russ, and Duane Heaton visited Indian Ridge Marsh in Chicago's Calumet area (south of the city, near the Indiana border). Work being conducted at the site is funded by a GLNPO grant to the Chicago Department of Environment. With technical assistance from the Illinois Natural History Survey, the City is comparing methods of controlling purple loosestrife, an invasive species of many wetlands. A number of plots have been established to test alternative treatment methods including manual removal, herbicide treatment, and biological control with loosestrife-eating beetles. Prior to in-



Purple loosestrife taking over a wetland.

troductioin, the beetles had undergone extensive study at Cornell University to be sure the beetles would not themselves become an invasive species. During the visit, the City and the Illinois Natural History Survey conducted their Spring monitoring of species present in each plot, percent cover of each species, height of the five tallest purple loosestrife plants, abundance and impacts of leaf-eating beetles. Similar measurements were noted along a 10-meter transect from one corner of each plot. The City is planning to build an Environmental Center in the area, and the work will also form the basis for an education exhibit at the Center. (Contact: Duane Heaton, 312-886-6399, heaton.duane@epa.gov)

Invasive Species Issue Gets High-Level Attention

The Binational Executive Committee — senior-level executives from U.S. and Canadian Federal, State, and Provincial agencies who oversee the implementation of the Great Lakes Water Quality Agreement -- highlighted the issue of invasive species at their meeting in Toronto, Canada on June 20th and 21st. To raise awareness and encourage agency involvement, speakers gave overviews of several ongoing Great Lakes invasive species initiatives:

- Commander Mike Gardener of the U.S. Coast Guard and Steve Peck of the Canadian Coast Guard presented an overview of the existing Great Lakes ballast water program.
- Allegra Cangelosi of the Northeast Midwest Institute gave an update on the status of the reauthorization of the Non-Indigenous Species Act.
- Mark Hovorka of Environment Canada's Canadian Wildlife Service described Canada's National Plan on Invasive Alien Species.
- Tom Johengen from the National Oce-

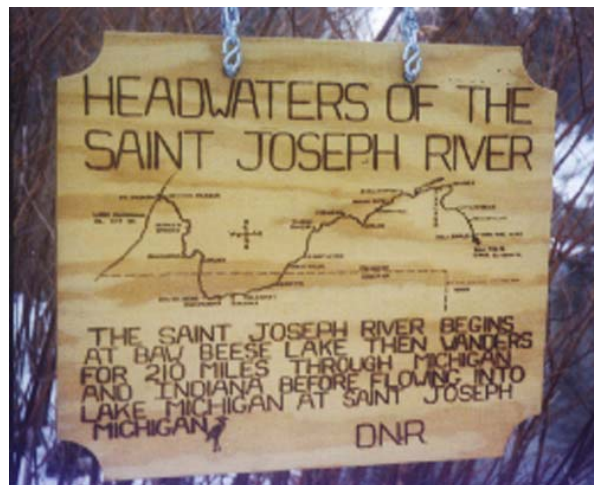
anic and Atmospheric Administration described research being conducted on what invasive organisms may be carried in ships which officially are considered to have no ballast onboard.

- Hugh MacIssac of the University of Windsor-Great Lakes Institute for Environmental Research described new developments in invasive species.

A compendium of these presentations will be available this Summer. (Contact: James Schardt, 312-353-5085, schardt.james@epa.gov)

St. Joseph Watershed Conference

The Lake Michigan LaMP and Forum in cooperation with the Great Lakes Commission, Western Michigan University and Friends of the St. Joe held a St. Joseph River Watershed Conference June 10th and 11th at Century Center, South Bend, Indiana.



Sign Marking Headwaters of St. Joseph River.
(Made by Dorla Null, donated to the Friends of the St. Joe River Association, Inc.)

The 100 participants were drawn from both the Indiana and Michigan portions of the watershed. The conference was opened by Al Smith, President of the Friends of the St. Joe River Association and Lori Kaplan, Commissioner of the Indiana Department of



Lake Michigan LaMP graphic

ment Plan (LaMP).

The conference provided the opportunity for announcement of a Sediment Transport and Watershed Modeling project in the basin planned by the US Army Corps of Engineers, a Clean Water Act Section 319 watershed planning project to develop an approvable watershed management plan for the St. Joseph basin uniting interest and data from both Indiana and Michigan. The dinner keynote speaker was David Dempsey, Policy Advisor for the Michigan Environmental Council and author of "Ruin and Recovery, Michigan's Rise as a Conservation Leader."

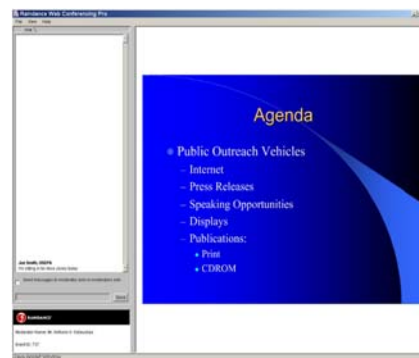
This conference launched the Lake Michigan Watershed Academy, a project of the Lake Michigan LaMP 2002. (Contact: Judy Beck, 312-353-3849, beck.judy@epa.gov)

For more information on the Lake Michigan LaMP and the 2002 LaMP Update, visit: <http://www.epa.gov/glnpo/lakemich/index.html>.

GLNPO Tests Remote Meetings Technology

Use of Raindance web conferencing service in the Great Lakes program began in June and increased in July. Web conferencing allows "content-rich" meetings to take place

without travel. Users can participate in meetings from anywhere using only their computers' connection to the Internet and a telephone. Participants join into various web conferencing events by visiting a web site, <http://glnpo.raindance.com> and selecting a conference ID given them by the individual that initiated the conference. Ten conference moderators from USEPA and Environment Canada have been trained to host conferences. Participants require no training, since the Raindance web conferencing product is characterized by its ease of use.



Web conference underway

GLNPO intends to use this technology to support binational projects in which USEPA and Environment Canada participate, including the State of the Lakes Ecosystem Conference, the Great Lakes Binational Toxics Strategy, the binational.net web site, and others. A total of ten "seats" have been acquired that allow ten simultaneous users to participate in one conference or several smaller conferences. Use of the system in conference rooms expands the number of participants that can join into such a meeting. (Contact: Pranas Pranckevicius, 312-353-3437, pranckevicius.pranas@epa.gov)

We welcome your questions, comments or suggestions about this month's Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.